

In view of the great complexity of the subject and the small amount of information as yet available on several important points, it will easily be understood that the above arrangement only professes to be tentative*. It is given here not alone for its own interest, but because it shows very clearly a phenomenon often to be met with in the attempt to deal with problems of this kind. The group of genera on the right-hand branch have broad, usually well-regioned bodies †, and legs which are knobbed and ridged (except the walking-legs of *Dromia*). Those on the left-hand branch have simple legs and narrow bodies, almost without trace of regions. Now, the names followed by a star are those of genera which have lost the epipodites of their chelipeds, and it is easy to see that a division made on this feature would cross that made on the shape of the body and legs. Again, the genera after whose names a dagger stands are those in which the sternal grooves end together, so that by these grooves a third separation could be made. And, to take one more criterion, a thorn appears on the outer side of the last joint of the fifth leg in genera which, on other grounds, are separated as widely as *Dromidiopsis* and *Cryptodromiopsis*. Indeed, the whole tree is a good example of that kaleidoscopic shuffling of characters which so often meets the student of zoological genealogy, and whose interest lies in the suggestion that it makes of a tendency in the organization of the animals in which it is found to fall into certain types of structure somewhat reminiscent of the discontinuous variation of the Neo-Mendelians.

XLI.—On the Affinities and Nomenclature of certain Genera of Melolonthid and Rutelid Coleoptera. By GILBERT J. ARROW.

IN Gemminger and Harold's Catalogue of the Coleoptera the genus *Stethaspis* (in the Melolonthidæ) is represented by the single species *suturalis*, Fabr., of which *Micronyx chlorophyllus*, Boisd., and *Paranonca prasina*, Cast., figure as synonyms. Lacordaire expressed himself very doubtful of the correctness of the latter identification, and in 1873 *Paranonca* was referred by Lansberge to its right position with the

* This is especially the case with *Lasiodromia*, *Cryptodromiopsis*, and *Dromides*, whose position is extremely doubtful.

† With some exceptions it may be said that species belonging to genera on the right half of the diagram are broad, those on the left long.

Australian Rutelidæ. Recently Mr. F. Bates has called my attention to the fact that this genus is not really distinguishable from *Schizognathus* as at present constituted; but the nearest ally of Castelnau's species cannot be exactly determined from the curious fact that, although it does not appear to be rare, the male is not yet known. In all the species at present referred to *Schizognathus*, on the contrary, the female appears to be by far the less common.

The forms collected together under the name of *Schizognathus* will have to be separated when adequate collections are available for study, for they do not constitute a homogeneous series; but, although in the absence of the male sex we are dependent on analogical reasoning, there is cause to believe that *Paranonca prasina*, Cast., will eventually be found truly congeneric with *Schizognathus prasinus*, Boisd., and *S. Macleayi*, Fisch., the typical species of the genus.

In consulting Hope's description of his genus *Stethaspis* I have been surprised to find that there is no correspondence with the Fabrician species named as its type, that species having been described from a specimen now in the British Museum. In order to clear up this fresh complication I have examined the original specimens in the Hope Collection, and found, as I was led to expect, that the true *Stethaspis* is based, not upon the New Zealand *Melolontha suturalis*, F., but upon the Australian *Xylonychus eucalypti*, Boisd. Hope appears to have had specimens of both before him, but the one which he identified as the Fabrician species (and which he correctly recorded as from Australia) belongs to the second species. It is probable that it was to the New Zealand insect he referred as a second species of the same genus; but he obviously did not make any careful examination of it, having apparently no information as to its habitat. There are considerable differences between the two forms, but I cannot agree with Lacordaire in placing them at opposite ends of the family.

There are thus two names for the Australian genus and none for that from New Zealand, for the name given by Boisduval (*Micronyx*) had been previously used in the Coleoptera. Zoologists may differ as to which of the names now employed should be retained, for *Xylonychus* was in use many years before the appearance of Hope's name, although generic characters were not attached to it until twenty years after. My own view is that, since a mistaken identification, such as that of Hope, must always be considered possible when the founder of a genus has not had before him the type of the

species upon which it is founded, a name is not entitled to recognition so long as it is unaccompanied by a description to afford evidence as to its identity. For this purpose, of course, description of the typical species, or even a statement that the genus is based upon an actual type specimen, must be admitted as sufficient.

I therefore consider that *eucalypti*, Boisd., and its congeners should properly be called *Stethaspis*, and for the New Zealand insect (*suturalis*, Fabr.) I propose the new name *Chlorochiton*. The genus has been fully characterized by Lacordaire, but I have given its essential characters in the table which follows, in order to compare it with its nearest allies, with which it was not associated by that entomologist. One of these has hitherto been wrongly placed with the Rutelidæ; this is *Modialis prasinella*, Fairm., a Chilian insect, whose closest affinity seems to me to be with *Phytolæma*, another Chilian genus belonging to the Heteronycides of Lacordaire.

The latter genus and *Chlorochiton* (*Stethaspis*, Lacord.) were assigned to different groups by Lacordaire on account of the produced metasternum of the latter. Later knowledge has shown that this feature is exceedingly inconstant and liable to be misleading as a basis of classification, and its occurrence in *Modialis* seems to me to necessitate the fusion of the groups Stethaspides and Heteronycides. With the exception of *Phytolæma* and one or two other small genera occurring on the Pacific coast of South America, all the insects placed in both divisions belong to the Australian Region, so that this course is supported by their geographical distribution.

The following table shows the differential characters of these hitherto scattered genera which I am proposing to bring together. Although all highly peculiar forms, and differing in important particulars, I consider that they have closer relationships among themselves than with any other genera known to me. They all agree in a superficially Ruteloid appearance, in their prominent front coxæ, distinct and emarginate labrum, and ligula fused with the mentum.

Junction of mentum and ligula straight; claws simple.

Antennæ 8-jointed; club 3-jointed *Chlorochiton* (New Zeal.).

Antennæ 9-jointed; club 5- or 6-jointed *Stethaspis* (Australia).

Junction of mentum and ligula angulate; claws toothed.

Antennæ 8-jointed; club 4-jointed (♂);

metasternum not produced *Phytolæma* (Chili).

Antennæ 9-jointed; club 3-jointed; meta-

sternum produced *Modialis* (Chili).

Stethaspis (*Xylonychus*, Lacord.) was placed with the true

Melolonthides by Lacordaire; but that author cannot, I think, have compared it with *Chlorochiton*, or he would not have widely separated them. He has described the front coxæ of the former as transverse, but a very casual examination shows that there is practically no difference in this respect between the two genera. He was also mistaken in the number of joints in the antennæ of *Chlorochiton* and *Phytolæma*, to both of which he attributed nine joints. As to the latter there has been a curious difference of opinion. Solier stated that there were nine antennal joints in *P. mutabilis*. Blanchard counted eight in the same species, as did Redtenbacher in *P. elaphocera*, while Lacordaire corroborated Solier. After a careful examination of two species of the genus I have concluded that the two last authors mistook a condylar process at the base of the first lamella of the club for an additional joint.

Of the other genera most nearly related to the foregoing, *Colymbomorpha* and *Pyronota* (respectively inhabiting Australia and New Zealand) are united in the Munich Catalogue (following the rather hesitating opinion of Burmeister). They are entirely distinct, however, differing widely in the antennæ, mouth, claws, and the front tibiæ of the male.

XLII.—On Two new Voles of the Subgenera *Pitymys* and *Microtus*. By G. E. H. BARRETT-HAMILTON.

I. *Microtus (Pitymys) Thomasi*, sp. n.

Colour. Above near "mummy-brown"*, the general effect being due to the tips of the hairs, which are thus coloured for a length of about 2 millim.; the remaining 6 millim. are "slate-black," which colour, showing unevenly through the brown tips, gives the whole a finely grizzled appearance. The colour of the upper surface becomes lighter and more yellowish on the sides, but passes without any very distinct line of demarcation into the dirty light buff of the underside. Feet dirty white.

The ears are nearly hidden in the fur. The length of the hind foot is about three quarters that of the tail.

* Names of colours placed in inverted commas are taken from Mr. Robert Ridgway's 'Nomenclature of Colours,' 1886.